

## II. Alternatives Analysis - continued

3. Has water reuse or recycle been investigated as an alternative to discharge?

Yes

No



(If yes, then provide the reasons why it is not a feasible alternative

Water recycling will be used as much as possible one way water will be reused will be for dust control on the roads an face-up area however this will be minimal (5%) compared to the total that will be controlled by the pond. Another method of reuse would be for the residents to use for watering their livestock and irrigation for crops. However there is little live stock in the area and the irrigation would only be seasonal having a minimal effect. During a 25 year 24 hour storm event 737,000 gallons of water would be treated by the pond.

4. Have alternative process or treatment options been evaluated?

Yes

No



(If yes, then indicate what process or treatment options have been evaluated and provide the reasons they were not feasible.)

All mining sites are required to have sediment ponds to control runoff from the areas. Therefore, we are limited to choosing the site with the least impact. Other methods of mining were considered however the coal seam lies at an elevation that creates too much overburden to mountaintop (which would greatly increases the sediment discharge) and contour mining would give access to less than 20% of the reserves(again also greatly increasing the sediment discharge above the proposed method). The underground method being proposed will create less disturbance and cause less runoff and pollution than any other method of mining and will recover 80% of the coal seam eliminating the possibility of remining the area. The cost of mining by this method compared to contour mining could result in the difference of cost of approximately \$5,000,000 to \$10,000,000 or more due to the cost of fuel, blasting, material handling and reclamation.

Constructing a sand filter on site was looked but limited room was a large factor and they are not very effective in removing the types of sediment from a mining operation and would have to back flushed continually costing additional money. They are not very effective at handling large volumes of water during a heavy storm event. The capital cost of an on-site treatment plant like one used for treatment of domestic sewage is \$300,000. Also after the operation is complete removal disposal and reclamation of the unit would cost an additional \$150,000 or more.

It is not common practices to have any controlled hydrologic releases. However, if it were to become necessary to have a controlled hydrologic release it will be at a time that the stream is flowing at a rate of 1 cfs or grater. Any controlled release will be monitored for water quality (with samples taken) during the release.

### **III. Socioeconomic Demonstration**

1. State the positive and beneficial effects of this facility on the existing environment or a public health problem.

Currently the face-up area is in an unreclaimed state due to the previous ownership filing bankruptcy. Upon completion of mining these areas will be backfilled and seeded which will greatly improve the quality of the water and reduce sedimentation in the area caused by these previous disturbances. The sediment structure is currently permitted under another KPDES permit and will continue to discharge whether sapphire Coal is permitted to discharge at this location or not.

2. Describe this facility's effect on the employment of the area

Mining in some way drives the vast majority of the employment and revenue in the area. Lost jobs in the mining industry relate directly to lost revenue by local markets and businesses. Sapphire Coal Company provides jobs in Letcher County at present and has for several years. This proposed silt structure will control sediment for a face-up area for a new underground mining operation that will expand current operations. Without this new underground operation it would effect all the employees either by layoffs or job loss entirely. This facility will help to keep all employees working (continued)

3. Describe how this facility will increase or avoid the decrease of area employment.

The proposed underground mine is an expansion mine for the company. This facility if allowed to open will provide employment to new employees and also for more revenue for other businesses in the area. Not having the proposed mine allowed to operate and expand and not being able to obtain necessary permits to operate, the chance to provide new employment in the area will be greatly reduced also the tax monies generated by and because of the operation. (continued)

4. Describe the industrial or commercial benefits to the community, including the creation of jobs, the raising of additional revenues, the creation of new or additional tax bases.

While keeping the miners employed, the facility will allow the miners to continue to contribute to local groceries and gas stations and other small commercial businesses. Eastern Kentucky has a delicate balance of workers and people offering goods and services, any large loss of jobs could easily throw this balance off and adversely affect the livelihoods of those in other industries in the area. (continued)

5. Describe any other economic or social benefits to the community.

Simply maintaining existing jobs is very important to a struggling economy in the area. Sapphire Coal Company currently employees averages between \$55,000 to \$65,000 per year. An additional \$1.0 - \$1.5 million dollars will be spent with companies and vendors in the area by Sapphire Coal. (continued)

### III. Socioeconomic Demonstration - continued

- |  | <u>Yes</u>                          | <u>No</u>                           |
|--|-------------------------------------|-------------------------------------|
| 6. Will this project be likely to change median household income in the county?        | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| 7. Will this project likely change the market value of taxable property in the county? | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| 8. Will this project increase or decrease revenues in the county?                      | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| 9. Will any public buildings be affected by this system?                               | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

10. How many households will be impacted by this project?      **20 to 30 plus 60 to 90 for 80 to 120**

11. How will those households be impacted?

**20 to 30 plus households will be directly impacted, this number of households (Sapphire Coal employees), at this time would earn a total of \$1,100,000 to 1,800,000 a year. (continued)**

- |  | <u>Yes</u>               | <u>No</u>                           |
|--|--------------------------|-------------------------------------|
| 12. Does this project replace any other methods of sewage treatment to existing facilities?<br>( if so describe how) <b>This facility is not a sewage treatment facility but a sediment control structure and would not replace or affect any other sewage treatment facility. The primary sewage treatment in this area is individual septic systems.</b> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

- |   | <u>Yes</u>                          | <u>No</u>                |
|---|-------------------------------------|--------------------------|
| 13. Does this project treat any existing sources of pollution more effectively?<br>(If so describe how.) <b>The sediment control structure proposed for this facility will reduce the amount of pollution discharged into the water and retain the sediment from the job site due to existing disturbances in the area. Most of the area proposed for the face-up area is previously disturbed with no silt control measures. Construction of the site will control this sediment and runoff from the area.</b> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

### III. Socioeconomic Demonstration

2. (continued) and create approximately 20 to 30 new jobs. This will directly affect the employment of the present employees and the new employees, and indirectly approximately 90 – 120 employees of other businesses and vendors in the counties where they do business. By having this operation insures these jobs continue and prevents unemployment.

3. (continued) This would negatively affect the present and future employment in the county for all employees of Sapphire Coal Company and employees of other businesses in the area where they spend their wages. Without these jobs which are high paying jobs in Letcher County, the employees would be forced to leave the area in search of other jobs, accept lower paying jobs, or receive unemployment benefits along with federal and state aid. Opening of this facility will insure new employment for 20-30 new employees for years to come. The unemployment rate for Letcher County is 12%, by loosing any mining jobs would only increase this percentage in an area where 27.1% of the residents income is below poverty level with an average household income of \$23,428 a year. Of the jobs in the area 17.4 % are mining jobs. These jobs pay \$55,000 to \$65,000 per year. By adding 20-30 new jobs will add an additional \$1,100,000 to \$ 1,800,000 in wages to be spent in the community.

4. (continued) The mining industry provides a large amount of jobs in this region that depends largely on it for employment. The high paying coal related jobs in the area increases taxes for local, state and federal governments because of the higher taxes paid due to the increased wages. These jobs being in the region is providing people with work earning better wages and not leaving the area therefore keeping the money and taxes in the region. Approximately \$500,000 per year of coal severance tax will be generated by this operation. Approximately \$90,000 a year will be paid in sales taxes by the employees spending their wages in the area. Additional revenue is available for road improvement, sewer projects and new water line construction, new schools all of which helps to bring other businesses and industry to the area it Letcher county, which in return brings additional tax revenue and jobs.

5. (continued) by having this operation will 20-30 new jobs will add an extra \$1,800,000 into the local economy of Letcher county and surrounding areas.

11. (continued) An additional 60-90 households with an average earning \$23,428 per household would be indirectly impacted for a total of between 80 and 120 households.

The operation will have an extended impact on the households by the extended employment of the workers. Sapphire Coal Company provides a source of income for the households of Letcher county in Eastern Kentucky by employing residents of the area. If the loss of this operation were to occur these households would be without income or a drastic loss of income which would affect lifestyle and fewer if any resources to provide for their families. This could result in the families having to relocate to other areas to find new jobs, disrupting the family and children's life. If other lower paying jobs were taken in the area would mean a difference in \$500 to \$700 a week. This operation helps continue existing jobs throughout the county not only just for their employees but employees of other establishments as well.